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10/550,188

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EXAMINER

COOK, JONATHAN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/550,188 | Applicant(s) O'GORMAN ET AL. | |
| | Examiner JONATHON D. COOK | Art Unit 2886 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-46, 48-58, 62 and 63 is/are rejected.
- 7) ☒ Claim(s) 47 and 59-61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/22/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Specification Objections

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and

descriptive, preferably from two to seven words may not contain more than 500 characters.

- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).
- (e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.
- (f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in

general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The disclosure is objected to because of the following informalities: While in general all the information required to be present in the specification appears to be included the arrangement of the information is jumbled and no titles are provided to delineate between the various sections. Further note, in the first paragraph a statement of priority is required.

Appropriate correction is required.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. In particular the reference GB 0223448.2 is cited by applicant but not submitted.

Claim Objections

Claims 60 & 61 are rejected to because of the following informalities:

In Claim 60 the limitation states "alternatively comprises providing a tunable laser." This language is objectionable in the format it is in because it is a dependent claim that depends from claim 59 where the source is a broadband source. Examiner finds the scope indefinite as it is set out because the tunable laser might cover a different range of wavelengths or a completely different set of wavelengths and this

could affect the operation of the device whereas if the limitations in claim 59 said “broadband or tunable laser” it would be understood these are coequal alternatives.

In Claim 61 the limitation refers to “the third Airy etalon” this lacks antecedent basis and the term is improper. Appropriate correction is required.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 63 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim is drawn to a computer program comprising code means for performing all the steps. This is non-statutory subject matter.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 35-38, 40, 41, 48-53, 56-58, 62, & 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Applicant's Admitted Prior Art (AAPA)** in view of **Pontis et al** (US PAT 6,631,146) (Pontis).

Regarding **Claims 35, 36, 48, 49, 58, & 63**, AAPA discloses and shows in **figs. 1-3** a device for measurement of optical wavelength, comprising:

a coarse monotonic or linear spectral filter (**15**) (applicant's coarse optical filter means) and second photodiode (**151**) (applicant's first optical power measurement means) for measuring the output of the coarse spectral filter and a reference photodiode (**14**) (applicant's second optical power measurement means) for measuring an unfiltered reference beam for coarse wavelength measurement;

two periodic transmission filters (**16, 17**) (applicant's fine optical filter means comprising first and second periodic optical filters) in quadrature (**see fig. 2**), such that

peak and troughs of the first filter coincide with linear ranges between peaks and troughs of the second filter, and third and fourth photodiodes (**151,161**) (applicant's optical power measurement means) for measuring output of the two periodic transmission filters in quadrature for fine wavelength measurement, respectively;

a branched waveguide (**see fig. 1**) (applicant's beam splitting means) that splits the optical beam between the unfiltered reference beam and the coarse and fine optical filter means;

processing means for determining the optical wavelength of the optical beam from a predetermined transmissivity-wavelength relationship of the coarse filter and the first and second optical power measurement means for coarse wavelength measurement and from predetermined transmissivity-wavelength relationships of the first and second periodic optical filters and at least one off the third and fourth optical power measurement means for fine wavelength measurement (**Paragraph 55 of instant application**);

AAPA fails to disclose the periodic optical filters having a finesse of 2 and a free spectral range of 100 GHz, the synchronized clock signal measurement means that synchronizes measurement of the output of the first, second, third, and fourth optical power measurement means, and the clock signal comprises a master module and slave module to trigger measurement and read output of the optical power measurement means;

However, Pontis shows in **fig. 6** and teaches sampling signals associated with sensors (**631-634**), photodiodes (**15**) and/or gain medium (**12**) (applicant's slave

modules) may be performed synchronously with the generation of the PWM control signals generated by FPGA (608) (applicant's master module) (**Column 11, lines 47-50**). The signal which controls this synchronization represents applicant's synchronized clock signal;

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of AAPA with the teachings of the synchronized clock signal measurement means that synchronizes measurement of the output of the first, second, third, and fourth optical power measurement means, and the clock signal comprises a master module and slave module to trigger measurement and read output of the optical power measurement means because it would help reduce the potential noise sources, further such sampling timing would have to be performed in sync to get usable results from the optical power measurement means because they must be compared with one another.

The AAPA as modified by Pontis still fails to teach the periodic optical filters having a finesse of 2 and a free spectral range of 100 GHz;

However, the finesse and spectral range are merely the characteristics of etalons and are determined by the user as needed;

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a finesse of 2 and a spectral range of 100 GHz, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Further as to **claims 58 & 63**, the method merely recites the steps performed by the device and thus would have at least been obvious in view of the device.

With regard to **claim 35**, language that does not limit a claim limitation to a particular structure does not limit the scope of the claim. It has been held that the recitation that an element is “adapted to”, “configured to”, “designed to”, “for”, or “operable to” perform a function is not a positive limitation but only requires the ability to so perform and does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 139. Such language also appears in many of the other claims, particularly 56 & 57. While the examiner is addressing these limitations they are not positively limiting.

Regarding **Claims 37**, AAPA discloses the coarse optical filter means comprises a dielectric multilayer coating on a glass substrate (**Paragraph 53 of the instant application**).

Regarding **Claim 38**, AAPA discloses that typically the periodic filters are Fabry Perot etalon filters (**Paragraph 52 of the instant application**).

Regarding **Claim 40**, AAPA discloses the aforementioned but does not explicitly disclose the periodic optical filters have a reflectivity of 25%;

However, this is merely another characteristic of the etalon and it is well within the capability of one of ordinary skill in the art to adjust according to the needs of the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the periodic optical filters have a reflectivity of

25%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding **Claim 41**, AAPA discloses the periodic filter (**16**) with a free spectral range of 50 GHz, but does not disclose the other periodic spectral filter (**17**) with the same.

However, the spectral range is merely a characteristic of etalons and is determined by the user as needed;

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a spectral range of 50 GHz for both etalons, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233

Regarding **Claim 42**, AAPA discloses the periodic filters are formed from two parallel dielectric mirrors (Paragraph 53 of the instant application);

The AAPA fails to disclose the filters are made from quartz;

However this is merely a choice of materials well within the realm of abilities of one of ordinary skill in the art;

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use quartz, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding **Claims 43-45**, AAPA as modified by Pontis discloses the aforementioned. The aforementioned Fabry-Perot etalon filters are used to calibrate the optical source, they each have their own output power measuring means, and the periodic filters have a precisely set or controllable free spectral ranges. Therefore the claimed limitations are met or in the very least obvious because this would merely be a duplication of parts.

Regarding **Claims 50 & 51**, the AAPA as modified by Pontis discloses the above but does not explicitly disclose that the clock signal enables 40,000 points on each of a plurality of channels to be read in 2.5 seconds, or that the synchronized clock signal enables 1,000 to 10,000 wavelength measurements/second;

However, these are merely ranges and it would be well within the capability of one of ordinary skill in the art to set these as needed;

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the clock signal enable 40,000 points on each of a plurality of channels to be read in 2.5 seconds, or to have the synchronized clock signal enable 1,000 to 10,000 wavelength measurements/second, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding **Claim 52**, AAPA as modified by Pontis discloses the aforementioned but does not explicitly disclose having a precision of "substantially" 2 picometers or substantially 250 MHz;

However, the claimed prior art is substantially accurate to within those ranges because they are results of the tuning of the etalons to an optimum range and it is well within the capability of one of ordinary skill in the art to adjust the device for that accuracy given the general structure is present.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to having a precision of "substantially" 2 picometers or substantially 250 MHz, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding **Claim 53**, AAPA discloses the coarse filter has a response in the C-band and the periodic filters have flat responses (**Paragraph 53 of the instant application**) and that interferometer optical wavelength meters are known for measuring wavelengths in the optical C-band (1525-1565 nm) and optical L-band (1568-1610 nm) (**Paragraph 2 of the instant application**).

Regarding **Claims 54 & 55**, the AAPA discloses the aforementioned subject matter but does not disclose temperature control means for stabilizing optical components thereof or the temperature control means comprises a thermistor or thermocouple and fan cooling or Peltier temperature elements;

However, Pontis teaches temperature sensors (**631-634**) which may be implemented by using a thermistor and temperature controllers (**66, 78, & 79**) which may be implemented using a Peltier device. Particularly the temperature controller (**66**) which regulates the temperature of the etalon;

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of AAPA with the temperature control means for stabilizing optical components thereof or the temperature control means comprises a thermistor or thermocouple and fan cooling or Peltier temperature elements because the regulation of temperature in optical devices is important because variations in temperature can cause noise in the signal, this goes doubly so for etalons which are often tuned to different wavelength peaks by temperature variations.

Regarding **Claim 56**, AAPA as modified by Pontis teaches the aforementioned but AAPA does not teach external triggering for synchronization with external instrumentation;

However, Pontis teaches that the measurements are synchronized with the PWM signals generated by an FPGA (**608**) and that the FPGA works in conjunction with a microprocessor (**602**) (applicant's external trigger) to operate and measure various parameters with the laser assembly (**10**) (applicant's external instrumentation) in order to control the entire system (**Column 10, lines 37-42**);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of AAPA with the teachings of external triggering for synchronization with external instrumentation because the adaptation of a processor for external triggering is well known and useful to allow one to easily modify the function of the system as needed.

Regarding **Claims 57 & 62**, the AAPA discloses the aforementioned but does not explicitly disclose the apparatus arranged to measure infrared or visible wavelengths;

However, the use of etalons to filter and photodiodes to measure any particular wavelength is well within the capability of one of ordinary skill in the art depending on the needs at the moment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to measure infrared or visible, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

4. Claims 39 & 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over **AAPA** in view of **Pontis** and further in view of **Colbourne et al** (PGPub 2001/0021053) (Colbourne).

Regarding **Claims 39 & 46**, AAPA as modified by Pontis teaches the aforementioned but does not disclose the phase offset between the first and second periodic optical filters in quadrature is tuned by angle, temperature, or pressure using a piezoelectric transducer;

However, Colbourne teaches that varying the optical path length between the etalon end faces (applicant's phase offset) can be accomplished by providing a temperature change to the etalon (**Paragraph 78**);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of AAPA as modified by Pontis with the first and second periodic optical filters in quadrature is tuned by angle, temperature,

or pressure using a piezoelectric transducer because it would allow for the fine tuning of the filters in case they needed to be adjusted to remain in quadrature.

Allowable Subject Matter

Claims 47 & 59-61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to **Claim 47**, the prior art of record, taken alone or in combination, fails to disclose or render obvious free spectral range of the calibration etalon filter differs just sufficiently from the free spectral range of the periodic optical filters that the calibration etalon filter is in phase only at top, middle and bottom wavelengths of a range of measurements of interest to obtain co-incident or Vernier-like maximum power at those wavelengths, in combination with the rest of the limitations of the claim.

As to **Claim 59**, the prior art of record, taken alone or in combination, fails to disclose or render obvious calibrating the processed readout from fine periodic filters to the reference wavelength of the calibration etalon filter, in combination with the rest of the limitations of the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHON D. COOK whose telephone number is (571)270-1323. The examiner can normally be reached on Mon-Fri 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on (571)272-2287. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jonathon Cook
Patent Examiner
AU:2886
January 31st, 2008

/TARIFUR R CHOWDHURY/
Supervisory Patent Examiner, Art Unit 2886